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USSR Report

AGRICULTURE

No. 1274



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MAJOR CROP PROGRESS AND WEATHER REPORTING

CONDITION OF WINTER CROPS IN LATVIA WORSENS

Riga SOVETSKAYA LATVIYA in Russian 17 Mar 81 p 3

[Article by V. Knava, agrometeorologist: "Weather and Crops"]

[Text] Plant revegetation is expected in approximately 1 month. Winter crops are still dormant. Agrometeorologists together with agricultural workers are observing them.

The minimum temperature at the depth of the tillering node of winter crops in the first half of February remained close to zero. Under such conditions an increased expenditure of nutrients accumulated since the fall continued in plants. The appearance of a ground ice crust 1- to 2-cm wide in the fields of the republic's eastern regions was also an unfavorable phenomenon for wintering crops.

In the second half of February and in the first week of March on bright nights frost reached 18 to 24 degrees and on snow in the republic's eastern regions, 25 to 30 degrees. During that time the soil temperature was also lowered slightly, that is, minus 3 to 6 degrees.

This year soil froze at a small depth, that is, 10 to 40 cm, and in the republic's far eastern regions, 50 to 70 cm.

At the end of February and the beginning of March 206 farms and 20 hydrometeorological stations made a routine inspection of the condition of winter crops on an area of about 25,000 hectares. The results showed that the condition of crops worsened slightly as compared with the previous growth, which occurred 1 month earlier. The percent of samples with an increased thinness rose in winter rye from 18 to 23 and in winter wheat, from 16 to 20.

Clover is wintering satisfactorily.

On 8 March the weather became much warmer and maximum temperatures rose to 4-7 degrees above zero. It rained heavily. Snow began to thaw intensively. As a result, in the republic's western half there is no snow in fields, or it occurs here and there. In the eastern regions, as a result of condensation, the thickness of the cover in fields was reduced to 5-15 cm. A sizable--20 to 30 cm--cover still remains at the Vidzemskaia and Aluksne elevations (Gayzin'kalns--49 cm).

However, winter is not yet surrendering its positions. The frosty weather will remain in the next few days.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

COTTON PLANTING IN KIRGIZIA--Osh, 26 Mar--Cotton planting has begun in the country's most mountainous field in Kirgizia. The farmers of the Kyzyl-Dzhar Valley were the first to take out mechanized complexes to plantations. Cotton growers from the brigade of A. Akmatova, deputy of the USSR Supreme Soviet, who have developed a large area of virgin land, have placed seeds in soil on dozens of hectares. The sowing campaign is expanding in the Aravanskaya and Kugartskaya valleys. Effective sowing schemes have been developed for every level of mountainous plantations. The Ipatov method of equipment operation will help cotton growers to maintain high rates of the sowing campaign. Highly productive cotton varieties of Kirgiz and Uzbek selection have been selected for different zones. This year the republic's cotton growers have committed themselves to deliver 210,000 tons of raw cotton to the cotton cleaning industry. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 81 p 17 11,439

SOWING IN BATKENSKIY RAYON--Osh, 23 Mar--Farms in Batkenskiy Rayon were the first to complete the sowing of spring crops in Kirgizia. Machine operators needed only 5 days to place seeds in fields. By using advanced techniques, grain growers were able to shorten the usual time of work by one-half. All agricultural equipment operated in two shifts according to the Ipatov method. The sowing campaign is conducted at all the "stages" of mountain farming at the best and shortest time. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 24 Mar 81 p 17 11,439

TOPDRESSING OF WHEAT, BARLEY--Ashkhabad, 21 Mar--The republic's grain growers are successfully performing all the operations connected with the care of crops and harvest accumulation in the winter field. The second topdressing of wheat and barley with mineral fertilizers is being completed and vegetative irrigation has expanded on a wide front. These operations have been especially well organized on farms in Gyaurskiy and Ashkhabadskiy rayons. The development of winter grain crops is much ahead of the usual schedule everywhere and their mass harvesting will begin as early as the first half of May. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 22 Mar 81 p 17 11,439

WHEAT TILLERING IN TURKMENISTAN--Ashkhabad, 20 Mar--The topdressing of winter grain has been completed in Turkmenistan. Water is supplied to fields for the third time. Owing to the thoughtful care mass wheat tillering has begun and barley has already produced shoots on many plots. As a result of the improvement in agricultural practices, 20 quintals of grain per hectare are now to be obtained on an area of 85,000 hectares, which is more than last year. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 21 Mar 81 p 17 11,439

CORN PLANTING IN TADZHIKISTAN--Dushanbe--The planting of corn for grain is proceeding at full speed on farms in Moskovskiy Rayon in Kulyabskaya Oblast in Tadzhikistan. /Text/ /Moscow TRUD in Russian 25 Mar 81 p 1/ 11,439

SUGAR BEET PLANTING--Frunze--Kirgizia's farmers began the planting of sugar beets yesterday. /Text/ /Moscow TRUD in Russian 25 Mar 81 p 1/ 11,439

EARLY POTATO PLANTING--Przheval'sk--Potato growers in Issyk-Kul'skaya Oblast have placed the early arriving warm weather at the service of the harvest. They have begun potato planting more than half a month earlier than the usual date. /Text/ /Moscow TRUD in Russian 28 Mar 81 p 1/ 11,439

FINE-FIBER COTTON SOWING--Kurgan-Tyube--Kolkhozes and sovkhoses in Tadzhikistan's Vakhsh Valley have begun the sowing of fine-fiber cotton. Subdivisions of inter-farm enterprises for the mechanization and electrification of agriculture are engaged in this work. Having concentrated all equipment, they expect to place seeds in soil in 5 or 6 days. In the first year of the five-year plan the republic's cotton growers have committed themselves to deliver 302,000 tons of fine-fiber cotton to industry. /Text/ /Moscow TRUD in Russian 28 Mar 81 p 1/ 11,439

SOWING IN TALASSKAYA OBLAST--Talas--Spring has summoned the farmers of Kirgizia's Talasskaya Oblast to the field. The machine operators of Manasskiy Rayon were the first to go out to the fields. They committed themselves to sow spring crops in a short period--in a week. A total of 120 overall mechanized detachments have been established in the oblast for a rapid planting of the new harvest. Widely introducing highly productive wheat and barley varieties of local selection and improving agricultural practices, grain growers plan to obtain no less than 40 quintals of grain per irrigated hectare. /Text/ /Moscow TRUD in Russian 18 Mar 81 p 1/ 11,439

SOWING IN NARYNSKAYA OBLAST--Naryn, 20 Mar--Mechanized sowing complexes have gone out to the country's most mountainous field in Narynskaya Oblast. During the 10th Five-Year Plan grain growers in close cooperation with reclamation specialists and scientists transformed the mountain plateau of the Central Tyan'-Shan' into a major granary of Central Asia. The oblast's irrigated field exceeds 100,000 hectares and grain crops are now placed on regularly irrigated land. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 21 Mar 81 p 1/ 11,439

SPRING FIELD WORK--Frunze, 28 Mar--Ever newer farms and rayons in Kirgizia are joining in field work. Spring is ascending the mountains. Sowing is proceeding at full speed in Issyk-Kul'skaya Oblast. As in past years, sowing time has arrived earlier on farms in Issyk-Kul'skiy Rayon. From the first day machine operators on the Tamchi and Uryukty sovkhoses, on the Kolkhoz imeni Kalinin and on the Novyy Put' Kolkhoz have carried out presowing cultivation at a good pace and are sowing seeds in a quality manner. The same picture exists in the fields of Tbnskiy and Dzhety-Oguzskiy rayons. Spring field work is also expanding in Narynskaya Oblast, where a considerable part of the arable land is located more than 2,000 meters above sea level. People in Kochkorskiy Rayon are working thoughtfully and skillfully. On the Son-Kul' Sovkhoz and the Kolkhoz imeni Frunze, which are famous for high harvests, special attention is now given to the quality of agricultural engineering operations. This striving is dictated by the desire to exceed the goals attained during the 10th Five-Year Plan. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 29 Mar 81 p 1/ 11,439

COTTON IN KURGAN-TYUBINSKAYA OBLAST--Kurgan-Tyube, 27 Mar--Sowing units have been taken out today to fine-fiber cotton plantations in Tadzhikistan's Vakhsh Valley. The field campaign coincided with the blooming of orchards and, according to the popular sign, this is the best time for the sowing of this heat loving crop. Subdivisions of interfarm enterprises for the mechanization and electrification of agriculture established in all rayons of Kurgan-Tyubinskaya Oblast are engaged in sowing. Last year's experience has shown that these enterprises successfully cope with the entire set of mechanized operations on plantations--from cotton sowing to cotton picking. They are performed on the basis of contracts with kolkhozes and sovkhoses. During the settlement of accounts special significance is attached to the quality of work. Every farm carries out sowing according to its agricultural practices, which take into consideration the characteristics of the types of soil, water regime and microclimate. Cotton varieties of local selection with the first and second type of fiber are placed on 100,000 hectares of fields. In the first year of the five-year plan Tadzhikistan's cotton growers have committed themselves to procure 302,000 tons of fine-fiber cotton. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 28 Mar 81 p 27 11,439

COTTON, CORN SOWING--The front of sowing work in the country's southern oblasts is expanding. Cotton sowing is proceeding at full speed in Turkmenia. More than .5 million hectares of irrigated land have been prepared there for this valuable crop. On the Krasnyy Oktyabr' Kolkhoz in Turkmen-Kalininskiy Rayon, Maryyskaya Oblast, cotton growers plan to gather 5,800 tons of "white gold" this year. Farmers of the Ittifok Interfarm Association in Tadzhikistan's Kulyabskaya Oblast are sowing corn at high rates. /Text/ /Moscow TRUD in Russian 29 Mar 81 p 17 11,439

SPRING SOWING IN KAZAKHSTAN--Alma-Ata--In Kazakhstan this spring happens to be unusually capricious. Cloudless days give way to incessant rain and sometimes it even snows. The bad weather seems to prod the farmers that have begun sowing early grain crops in the south. A fight for the utilization of every minute of good weather with the highest return is waged. The efforts of all the links of the sowing conveyer of the republic's southern oblasts are directed toward the performance of work in the shortest time and in a high-quality manner. Motors are not silenced almost around the clock and sowers, as well as transport workers, repairmen, the agricultural engineering service and fertility detachments, work efficiently. A reliable foundation was laid down for a successful start during the new five-year plan. Fields have been plowed since the fall. The best grain varieties of local selection producing 4 or 5 quintals of wheat and barley per hectare more than the previously regionalized varieties have been introduced into crop rotation. Organic fertilizers are applied to arable land more intensely than ever. Subdivisions of Sel'khozkhimiya work as one complex with farmers. According to the contracts they deliver fertilizers from warehouses directly to sowing machines strictly on schedule. Owing to this many sovkhoses and kolkhozes have reduced the number of highly skilled machine operators on secondary plots and have organized additional crews for the preparation of land areas. Special attention is given to the popularization of advanced experience. Farms in the pre-desert zone are adopting the soil protective farming system. On virgin land it has been mastered almost everywhere. However, this is a new thing for the south. Cooperative workers create the conditions necessary for highly productive labor. More than 300 motor shops have left the trade bases of oblasts engaged in mass sowing. Along routes coordinated with trade union committees of sovkhoses and kolkhozes they deliver necessities to sowing units. Booths operating on a voluntary basis, as well as

temporary public dining enterprises, have been opened in field camps. The front of work in Kazakhstan is expanding rapidly. Ever newer farms are beginning mass sowing. Grain crops will now occupy no less than 25 million hectares. [Excerpts] [Moscow TRUD in Russian 28 Mar 81 p 17 11,439]

PRESOWING FIELD WORK--Semipalatinskaya Oblast--Machine operators on farms in Ayaguzskiy Rayon are now on a presowing labor watch. And not only they. Farmers in the entire Semipalatinsk Irtysh area have decided to respond to the party appeal to increase grain and fodder production with specific deeds. Grain crops will now occupy more than 1 million hectares in the oblast and more than 700,000 hectares are allocated for fodder crops. Almost on this entire area fallow land has been turned over, plowing has been done for winter fallow, more organic fertilizers than last year have been carted out to the fields and snow retention work has been carried out. In brief, everything is being done so that the field may become more bountiful. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 26 Mar 81 p 17 11,439]

IMPROVED SEED GROWING--Omsk, 21 Mar--Sovkhozes and kolkhozes in Isil'kul'skiy Rayon increased the harvest of grain crops by almost 6 quintals per hectare during the 10th Five-Year Plan. The improvement in seed growing was an important factor in such an increase. For this sowing grain growers have again prepared quality seeds. Almost three-quarters of them meet first-grade requirements. Seeds of grain crops in Russko-Polyanskiy, Moskalenskiy, Lyubinskiy, Odesskiy and Bol'she-rechenskiy rayons have also been brought up to high sowing quality requirements. In the oblast special attention is given to the preparation and distribution among farms of seeds of intensive wheat varieties of local selection--Omskaya-9, Almaz, Lutescence-34, Sibakovskaya-3 and Irtyshanka-10. The areas under them will be expanded considerably. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 22 Mar 81 p 17 11,439]

MASS GRAIN SOWING--Taldy-Kurgan--The oblast's farmers embarked on the mass sowing of grain crops yesterday. More than 5,000 units operate around the clock. Soil is prepared with powerful tractors connected to cultivators at night and with anti-erosion implements during the day. This helps to retain more moisture in soil. Farmers have decided to increase grain production to 900,000 tons in the first year of the five-year plan. [Moscow GUDOK in Russian 27 Mar 81 p 17 11,439]

INDUSTRIAL SUGAR BEET GROWING--Dzhambul, 26 Mar--The oblast's farmers are transferring sugar beet cultivation to industrial techniques. They have begun a mass sowing of this industrial crop. More than 600 mechanized links operate in the field. The overall method of equipment utilization helps to shorten the time of sowing, which is to be done in 4 or 5 days. Sugar beet growers are establishing a reliable base for the production of a guaranteed harvest irrespective of weather conditions--an average of 400 quintals per hectare. [Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 81 p 17 11,439]

AGRICULTURE IN CRIMEA--Krymskiya Oblast--Spring has become the sole master in the Crimea in the first days of March. True, there was no real winter in the peninsula--winter wheat, rye, barley and rape did not stop their vegetation. Today a warm wind is also playing over the emerald fields, which occupy more than 600,000 hectares. The fight for an annual production of no less than 2 million tons of grain in the Crimea is continuing. No less than 34 quintals per hectare should now be gathered. High targets have been set for fodder crops, vegetables, grapes

and fruits. Kolkhozes and sovkhozes have adopted the policy of expansion of areas sown with corn, increase in the yield of winter wheat and an efficient utilization of the irrigated hectare. Agrochemists are now again in the field, where they apply fertilizers and prepare for irrigation--there was not much precipitation in winter. Together with agronomists they follow the intensity of moisture evaporation from soil and see to it that it is retained. Incidentally, in the Crimea the repair of the irrigation system, hydraulic structures and sprinkling machines has now been completed at the best time. Now it is up to operators, who should supply the water of the Dnepr. /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 81 p 17 11,439

SOWING IN ODESSKAYA OBLAST--Odessa--The oblast's grain growers have begun spring sowing. Machine operators in Izmail'skiy, Kiliyskiy, Bolgradskiy and other rayons near the Dunay were the first to take out units to the field. /Text/ /Moscow TRUD in Russian 25 Mar 81 p 17 11,439

SPRING SOWING IN CRIMEA--Simferopol'--Machine operators in all rayons in the Crimea have taken out sowing units to spring fields. Seeds of barley, oats, spring wheat and pulse and other crops have been placed in carefully prepared soil. /Text/ /Moscow TRUD in Russian 25 Mar 81 p 17 11,439

AERIAL TOPDRESSING IN MOLDAVIA--Kishinev--Agricultural aviation crews are engaged in the topdressing of crops in the second half of Moldavia's winter field. The help of aviators from Belorussia and the Russian Federation ensured high rates of work. /Text/ /Moscow TRUD in Russian 25 Mar 81 p 17 11,439

NITROGEN TOPDRESSING OF WHEAT--Odessa, 21 Mar--Grain growers in the Black Sea area have adopted the policy of increase in the production of strong and valuable wheat varieties. Nitrogen topdressing, on which the oblast's farms have embarked, will increase the strength of well-wintered winter crops. Farmers on the Kolkhoz imeni Kutuzov in Kiliyskiy Rayon were some of the first to go out to the field. Their own experience convinced them of the effectiveness of nitrogen fertilizers for the production of grain with superior baking properties. Last year such grain comprised almost one-half of the entire harvest. During the first year of the new five-year plan the oblast's rural workers intend to sell more than 300,000 tons of the grain of strong and valuable wheat to the state. /Moscow SEL'SKAYA ZHIZN' in Russian 22 Mar 81 p 17 11,439

EARLY GRAIN CROPS--Farmers in Odesskaya Oblast have embarked on the sowing of early grain crops. Having prepared themselves well for the spring campaign, grain growers in Black Sea steppes decided to complete the sowing campaign in the shortest time. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 31 p 17 11,439

TWO-SHIFT MACHINE UTILIZATION--Kherson, 28 Mar--Grain growers in the Black Sea zone of Khersonskaya Oblast completed the sowing of early grain crops. Work was done in 3 days--twice as fast as last spring. The concentration of equipment and specialization of links in overall detachments established on all farms contributed to this. In each such subdivision there are four links performing the entire set of field operations. An efficient interrelationship among them fully eliminated equipment downtime. To ensure a two-shift machine utilization, a few thousand young tractor operators, who completed courses for machine operators in the winter, were assigned to these detachments. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 29 Mar 81 p 17 11,439

SUGAR BEETS IN LITHUANIA--Vil'nyus, 20 Mar--The formation of 500 mechanized detachments for the cultivation of sugar beets was completed on kolkhozes and sovkhoses in Lithuania. Farmers in Vilkavishskiy Rayon, where every second farm specializes in the cultivation of this crop, made especially careful preparations for the sowing campaign. In the detachments there are links for the preparation of soil for sowing, transport links and links for the care of equipment. The rayon agrochemical service made recommendations for the application of mineral fertilizers and herbicides. The republic's sugar beet field will now be expanded to 40,000 hectares. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 21 Mar 81 p 17 11,439

SNOW HURRICANE IN MURMANSK--Murmansk--The snow hurricane that hit Murmansk in the morning of 27 March left 3-meter snow drifts on streets and dozens of vehicles stuck on roads. Even the city's old residents, who are used to the whims of the northern weather, were startled by this onslaught of the elements. Such phenomena were not observed there in March in the last 30 years. The city authorities, which had been warned by weather forecasters about the approaching hurricane, did everything to meet it fully armed. When the signal about the stormy weather was given, fishing and transport vessels took shelter in bays and port operations were suspended. Additional equipment was assigned for the clearing of the city's main roads. Vehicles on roads connecting Murmansk with other cities in the Kola Peninsula became the captives of snow. Yesterday morning, when the wind began to abate, they again set out on the road. Enterprises in the city and in other settlements subjected to the onslaught of the elements are returning to a normal work pace. /Text/ /Moscow TRUD in Russian 29 Mar 81 p 47 11,439

SNOWFALLS IN MARCH--Lipetskaya Oblast--Winter in Lipetskaya Oblast was warm, with little snow. But in March there were abundant snowfalls followed by freezing weather. Now on cloudless days fields have been freed from snow. Thawing snow is dripping more and more persistently. /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 31 Mar 81 p 17 11,439

EARLY SPRING CROPS--Stavropol'--Machine operators in Grachevskiy Rayon were the first to complete the sowing of early spring crops in Stavropol' steppes. They needed less than 3 days to place barley, oat, peas and grass seeds in arable land. /Text/ /Moscow TRUD in Russian 28 Mar 81 p 17 11,439

FODDER GRAIN CROPS--Elista--The sowing campaign has begun in the spring field of the steppe kray, which has now been expanded to almost 400,000 hectares. The bulk of the arable land has been allocated for grain fodder crops. /Text/ /Moscow TRUD in Russian 28 Mar 81 p 17 11,439

TOPDRESSING OF WINTER CROPS--Tbilisi--The topdressing of winter grain crops with mineral fertilizers in the Shiraki Steppe--the republic's granary--was completed 10 days earlier than usual. Aviators treated more than 50,000 hectares of fields. /Text/ /Moscow TRUD in Russian 28 Mar 81 p 17 11,439

FIELD WORK IN KARACHAYEVO-CHERKESIA--Cherkessk, 21 Mar--"The fight for moisture is the fight for the harvest!" With this slogan overall detachments and links in Karachayevo-Cherkesia began the harrowing of autumn-plowed areas, sowing of early grain crops and topdressing of winter crops. Machine operators at the Adyge-

Khabl'skiy and Zelenchukskiy interfarm enterprises were the first to take out units. The rate of work is increasing. The detachments of special departments of the Kol-khoz imeni Kirov and the Rodina Kolkhoz needed only 2 days to sow early grain and pulse crops. Potato, sugar beet and corn growers in the autonomous oblast are ready to go out to the field. Oblast and rayon headquarters have been established for a successful performance of spring field work. It was decided to complete the sowing of spring crops in 10 work days. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 22 Mar 81 p 17 11,439

SOWING IN DON AREA--Rostov-on-Don, 25 Mar--Warm spring days opened the road to the field for Don's machine operators. The first seeds of spring crops were placed in soil in the oblast's southern rayons. Farmers prepared themselves well for the beginning of field work. More than 2,000 transport and sowing detachments were placed on the line of readiness. The object of Don grain growers is to obtain no less than 8.5 million tons of grain. Therefore, they now give principal attention to the time and quality of sowing. On most farms seeds have been brought up to the first category and are placed in soil simultaneously with mineral fertilizers. A single system for the control of the quality of field work is in effect everywhere. Don's advanced machine operators decided to complete spring sowing in 35 to 40 hours. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 26 Mar 81 p 17 11,439

APPLICATION OF ORGANIC FERTILIZERS--Kalinin, 25 Mar--The oblast's machine operators are completing the delivery of organic fertilizers to fields. Almost 9 million tons have been delivered. Some rayons have coped with the assignment ahead of schedule. In Konakovskiy, Kalininskiy, Ostashkovskiy, Vyshnevolotskiy and a number of other rayons 9 to 12 tons of manure and compost per hectare of arable land have already been prepared. Recently, mechanized detachments have especially activated their work--spring is pressing. Every day they cart out about 70,000 tons of fertilizers. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 26 Mar 81 p 17 11,439

TOPDRESSING OF WINTER WHEAT--Kursk, 28 Mar--The March sun speeded up snow thawing in the Central Chernozem area. A mass topdressing of winter crops has expanded everywhere. Agricultural aviation planes are circling over fields. At the beginning of the last 5-day period in March with their help fertilizers were applied to more than 100,000 hectares of winter wheat. The largest areas were treated on farms in Belovskiy, Bol'shesoldatskiy, L'govskiy, Medvenskiy and Sovetskiy rayons. This spring 460,000 hectares of winter crops will be dressed, including 230,000 hectares by the most advanced root method. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 29 Mar 81 p 17 11,439

TREATMENT OF CORN SEEDS--Bryansk, 20 Mar--The presowing treatment of corn seeds, so-called hydrophobization, has begun in the oblast. This year 80,000 hectares of arable land--20,000 more than last year--have been allocated for this crop. Its cultivation is being transferred to an industrial basis and advanced cultivation techniques are being introduced. Fertile land is allocated for corn and mechanized links ensure plant care. Hydrophobization makes it possible to sow at an earlier date and to protect seeds against pests and diseases. Corn growers are now completing the latest preparations for the departure to the field. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 21 Mar 81 p 17 11,439

SPRING TOPDRESSING OF RYE--Orel--A mass topdressing of wheat and rye has begun on the oblast's fields. Workers of Sel'khozkhimiya associations provided mineral fertilizers in advance and repaired special machines. Granules of mineral fertilizers are now placed on slightly frozen soil and, on flat plots, even on the thin snow crust. Spring topdressing is to be carried out on all the 400,000 hectares of the winter field. [Text] [Moscow TRUD in Russian 18 Mar 81 p 17] 11,439

TOP DRESSING ACTIVELY CONDUCTED--Nikolayev, 26 Jan 81--As soon as a light frost touched the ground, hundreds of tractor units went out onto the field to continue top-dressing of the winter crops which they have already completed on 140,000 hectares of plantings. The agricultural workers of the Sovkhoz Primor'ye plan to harvest 30 quintals of grain crops per hectare this year, including 32 quintals of winter wheat per hectare. Therefore, they are actively top-dressing it--they are scattering mineral fertilizers with both ground equipment and are using aircraft for this. They planned to apply radical top-dressing on 2,300 hectares. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Jan 81 p 1] 6521

SEED PREPARATION--Taldy-Kurgan, 26 Jan 81--Winter has not yet managed to come into full swing and the agricultural workers of the oblast have already laid the first base for the future grain harvest. They completed seed preparation for the entire spring fields, which will occupy almost 400,000 hectares, 2 months earlier than last year. Industrial technology and the clear work of the agronomical service not only provided for rapid and high-quality seed preparation, but also made it possible to expand interfarm exchange of planting material and also to distribute local regionalized high-yield varieties, reproductions of which were produced at the oblast experiment station, on the sovkhoz Kapal'skiy and on other farms. Insurance stocks of seed were created at the same time. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Jan 81 p 1] 6521

FERTILITY DETACHMENTS--Alma-Ata--The local agrochemical complex--one of the largest in Kazakhstan--fulfilled the orders of the agricultural workers of Shuchinskiy Rayon, Kokchetavskaya Oblast, ahead of schedule. The fertility detachments completed application of mineral and organic fertilizers over the entire crop area of the first year of the 11th Five-Year Plan. Redeployment of the equipment to the adjacent Enbekshil'derskiy Rayon, in which 40,000 tons of composts must be hauled out to the fields, was begun immediately. All operations on preparation, storage and application of fertilizers to the soil have been mechanized in Shuchinskiy Rayon. The use of powerful loaders and Kirovets tractors with large spreaders eliminated intermediate transloading and losses of mineral fertilizers. Conversion to centralized agrochemical servicing was advantageous: every ruble expended on fertilizers yields 6 rubles of net income. The agrochemical complexes created in almost all rayons of Kazakhstan will expand the volumes of services during the new five-year plan. They will wage a struggle with field, orchard and vineyard pests according to orders of the farms. [Text] [Moscow GUDOK in Russian 17 Jan 81 p 1] 6521

FERTILITY CHARTS PREPARED--Odessa--The charts compiled by specialists of the Odessa Zonal Agrochemical Laboratory assist the agricultural workers of the Black Sea area in achieving a solid increase of yield with economic consumption of mineral fertilizers. The first "sailing directions for fertility," intended for the entire 11th Five-Year Plan, were transferred yesterday to farms of Nikolayevskiy, Berezovskiy and Velikomikhailovskiy Rayons. Guided by these recommendations, the agricultural workers can supplement the reserves of nutrients calculated for the planned harvest. The agrochemical workers will test the soils this summer and will take their agrochemical "photographs" on an area of approximately 500,000 hectares. [Text] [Moscow GUDOK in Russian 23 Jan 81 p 1] 6521

WEATHER CONDITIONS--"Will there be winter this year?" the residents of the valleys of Kirgiziya ask. "Indian Summer" prevailed here during all of December and turned completely toward spring in January. The grass is again becoming green on the meadows and forest clear areas, the fruit trees in the southern valleys have bloomed and become covered with young fruit and the blooms on the flowerbeds have dropped. Mushrooms have sprung up in many places on south-facing slopes, to the joy of mushroom hunters. The saying "the sun is for summer and winter is for frost" of these locales is seemingly untouched here: the average daily temperature has been constantly above freezing in all valleys of the republic. It was 10 degrees above the norm, reported the synoptic forecasters, at the beginning of the second 10 days of January. These weather conditions have been observed only twice within 30 years. [Text] [Moscow GUDOK in Russian 17 Jan 81 p 4] 6521

FERTILIZER APPLICATION--Bryansk--The agricultural workers of the oblast are preparing organic fertilizers ahead of the schedule. Approximately 4 million tons of compost--almost 700,000 tons more than by this time last year--have been delivered to the fields for the new crop. A total of 450 fertility detachments is now operating in the oblast. The machine operators of Sevskiy Rayon, who have applied three-fourths of the planned quantity of organic fertilizers, set the tone in the competition. Fertility "factories" are operating here on many farmsteads--peat and manure are being accumulated in special areas and compost is being prepared. [Text] [Moscow GUDOK in Russian 27 Jan 81 p 1] 6521

AIRCRAFT IN FERTILIZATION--Chernovtsy--The oblast Association Sel'khozkhimiya has become the host of all airstrips for all agricultural aircraft at Bukovina. The specially created service of the association has organized continuous work of aircraft to top-dress plantings of winter crops. Whereas application of fertilizers had only begun at this time in years past, more than 20 percent of the plantings have already been treated with mineral fertilizers from the air. [Text] [Moscow GUDOK in Russian 27 Jan 81 p 1] 6521

SEED CORN--Nal'chik--The green light has been flashed on the mainline railroad express trains with the mark "Planting unit," which follows from Kabardino-Balkariya to different sections of the country. The workers of the grading plants of the autonomous republic have already shipped 25,000 tons of high-quality seed corn to the grain growers of Krasnoyarskiy Kray and Tyumenskaya, Kemerovskaya, Omskaya and other oblasts of Siberia and the Far East. [Text] [Moscow GUDOK in Russian 27 Jan 81 p 1] 6521

PLANTING MATERIAL--Riga--Preparation of the planting material for the Latvian agricultural workers is being completed. More than 170,000 tons of grain seed--approximately 90 percent of the plan--has already been cleaned. In spring they must plant approximately 600,000 hectares of fields. Most seeds have been brought up to high planting conditions. New high-yield varieties will occupy many plots. [Text] [Moscow GUDOK in Russian 27 Jan 81 p 1] 6521

SEVERE WEATHER CONDITIONS--The alarming news came into the central farmstead of the Kolkhoz Path Toward Communism, Kosh-Agachskiy Rayon, Gorno-Altay Autonomous Oblast. There was a severe snowstorm in the remote natural boundaries where the herds of horses and yaks were wintering over, deep snow covered the pastures and the animals were threatened with starvation. A rescue party headed by the chief

zoological technician of the farm Nurmat Amenov, left immediately. Two tractors on tracks, which carried hay, combifeed, fuel, warm clothing and provisions, went ahead clearing the road. It was very difficult to gather the animals together in the surrounding snow. It was decided to separate into two groups, each would drive the herd of horses and the herd of yaks would move behind them. This complex and dangerous drive continued for 5 days. Once, when the train was camping near a lake, the yaks broke through the thin ice. And only the skill and brave actions of herder Uatkhan Zeynoldanov prevented misfortune. The animals were finally brought to a valley where the snow was not too deep and sections of the winter pastures were accessible for feeding. Saving the kolхоз cattle from snowy imprisonment, Sakarat Ayubov, Solton Bigaliyev, Maden Baykenov, Yerlenbay Konbukov and Kurman Ibikenov displayed real bravery. The Gorno-Altay Oblast newspaper ZVEZDA ALTAYA reported about this. [Text] [Moscow TRUD in Russian 14 Dec 80 p 4] 6521

MILD WEATHER CONDITIONS--Ashkhabad--Nature is quarreling with the calendar in Kara-Kalinskiy Rayon of Turkmeniya. The sun is shining like summer here in the picturesque locale of Yel-Dere ("Canyon of the Winds"). And for this reason, having confused the seasons, cherries have bloomed and thick young grass scattered with bright colors of flowers is stretching toward the light. Meteorologists told a TASS correspondent that the surprise of nature gladdens the animals and birds. It seems that they have gathered from the entire area in the canyon. The tail of the marten flashes in the bushes, the beautiful pheasant takes wing from under the feet of the timid Panir argali, which has come down from the snow-covered mountains. The workers of the game preserve, who have the opportunity to observe the animal world under unusual weather conditions, are also satisfied. [Text] [Moscow TRUD in Russian 17 Jan 81 p 4] 6521

STRAWBERRIES IN WINTER--Cherkessk--The family of A. Rosanov, a worker at the Cherkessk Low-Voltage Equipment Plant, were able to satisfy their sweet tooth during winter with ripe strawberries. The warm, sunny January weather brought this surprise. It is curious that the Rosanovs were able to grow summer strawberries in their kitchen garden. Just last summer, the berries became accustomed to the unnatural conditions of "cultivation," which is already a rarity. But blooming and ripening in January is something that no one of course expected. The unusually warm winter in Cherkessk and its vicinity has awakened nature. The grass has turned green where the sun is hottest and the buds on the trees have swollen in places. [Text] [Moscow TRUD in Russian 25 Jan 81 p 4] 6521

URAL RIVER STILL UNFROZEN--Gur'yev--The older residents of Gur'yev cannot remember when the Ural River, which passes through the town, was not completely covered with ice before the middle of January. But that has happened this year. Several small open areas have remained in the middle of the river. And two small seals are sporting in them. They swam up from the sea in October and have not left the environs of the city since then. The young people skate around the open areas, while the seals come to the surface and play. It is unknown whether the seals will be here till spring. The open areas are becoming smaller and smaller with each day and the river is being covered with a solid ice coat of armor. But this year the animals for some reason have preferred the city part of the river and frequently swim to here from the sea, which is 40 kilometers away. The residents have a kind attitude toward their guests from the Caspian Sea. [Text] [Moscow TRUD in Russian 27 Jan 81 p 4] 6521

SOIL FERTILITY--Penza, 13 Jan 81--The agricultural workers of Luninskiy Rayon have embarked on a campaign to increase soil fertility from the first days of the new five-year plan. Each of 80,000 hectares of plowed land will receive 5 tons each of fertilizers. Mechanized detachments have been created for this on all farms. They will haul out 200,000 tons of manure before the beginning of spring field operations. A good partner of the grain growers in increasing soil fertility has been rayon Association Sel'khozkhimiya. As early as this summer it assisted the kolkhozes and sovkhoses in compost preparation. And the work is now continuing. The skilled workers of the association have equipped the Kirovets tractors with attachments which permit the operators to open the side of the cars without leaving the tractor cab. This made it possible to make twice as many trips per day than previously. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 14 Jan 81 p 1] 6521

SOIL FERTILITY PLANNING--Yoshkar-Ola, 20 Jan 81--The mechanized detachments of the Association Mariysel'khozkhimiya have rendered a great deal of assistance to the kolkhozes and sovkhoses of the autonomous republic to increase soil fertility. Last year they hauled out 4.34 million tons of organic fertilizers to the fields, applied lime and phosphorite, treated the plantings with chemicals and top-dressed them with mineral fertilizers on a large area. The agrochemical workers of the Morkinskiy, Mari-Turekskiy, Paran'ginskiy and Zvenigovski Rayon Associations worked better than others. A large volume of agrochemical work is planned for the first year of the 11th Five-Year Plan. A 5-month period on hauling organic fertilizers to the fields and application of lime to acid soils and application of phosphorite is now under way in the autonomous republic. The agrochemical workers are performing the main part of this work. They will haul more than 2.7 million tons of organic fertilizers alone during the 5-month period. Twenty-nine fertility detachments are involved in this important work in the Association Mariysel'khozkhimiya. The mechanized detachments of Morkinskiy, Mari-Turekskiy, Sovetskiy and Paran'ginskiy Rayon Associations are conducting operations at high rates. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 21 Jan 81 p 1] 6521

WINTER CROPS--Krasnodar, 20 Jan 81--The Kuban' grain growers are making use of the January thaws for mass management of winter crops. Hundreds of aircraft of agricultural aviation and the crews of ground machines are top-dressing the barley and wheat with fertilizers. Nitrogen application has already been carried out on more than 600,000 hectares--one-third of the winter grain fields. The agricultural workers are tilling the fields especially carefully that have been allocated for cultivation of vigorous and valuable wheat. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 21 Jan 81 p 1] 6521

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LIVESTOCK

EFFECT OF SWINE-BREEDING COMPLEX SIZE ON PRODUCTION EFFICIENCY

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 1, Jan 81 pp 33-36

[Article by I. Dubinskiy: "Important Directions of Capital Investments"]

[Text] The accelerated development of swine breeding, whose share of the country's meat balance has reached 35 percent, is of important significance in solving the task of increasing meat production. In recent years, much work has been done in the branch to intensify it in every way possible, to transfer it to an industrial basis. About 500 industrial-type swine breeding complexes have been built and put into operation. Much experience has been accumulated, and its study and generalization will facilitate the search for and scientific substantiation of optimum solutions to the meat problem.

We studied the effectiveness of production at state complexes at which the highest production and economic indicators have been achieved. Analyzing their work enables us to reveal more fully the potential opportunities offered by the new form of production organization. The state complexes account for about 30 percent of all the pork currently being produced on sovkhozes of the USSR Ministry of Agriculture. In a comparatively brief period, we have created a new type of stockraising enterprise which is not inferior to industrial enterprises in terms of level of production concentration, technological equipment and production continuity. The basic indicators of complex production activity in 1979 as compared with average indicators for ordinary swine breeding farms on USSR Ministry of Agriculture sovkhozes are given in Table 1 [following page].

The qualitative production indicators on the complexes are significantly better than on farms of USSR Ministry of Agriculture sovkhozes. State complex work experience in pork production, which has been highly evaluated at the July (1978) CPSU Central Committee Plenum, quite obviously confirms the doubtless advantages of industrial-type production.

At present, we are planning and building complexes in four basic type-sizes -- for 12,000, 24,000, 54,000 and 108,000 head per year, with a closed production cycle. The operating efficiency of complexes of various type-sizes fluctuates within broad limits. We chose for analysis state complexes which have been in operation more than 29 months, that is, longer than the established normative period for mastering planned capacities (Table 2 [following page]).

Table 1. Basic Indicators of Sovkhoz and Complex Swine Breeding Farm Production-Economic Activity (farms and complexes with a complete production cycle)

	production capacity		average daily live weight		expenditures per quintal of weight gain		net cost per quintal live weight gain, in rubles		calculated expenditure per quintal live weight gain, in rubles		profitability level, in percent	
	head, 1,000	live weight gain, 1,000 quintals	gain, grams	live weight gain, 1,000 quintals	labor, man-days	feed, in quintals of fodder units	labor, in rubles	feed, in rubles	per quintal live weight gain, in rubles	per quintal live weight gain, in rubles	level, in percent	level, in percent
farms	1.7	1.5	254	18.3	9.2	168.7	181.5	- 1.4				
complexes	37.4	37.7	413	5.4	5.7	115.2	144.0	+30.3				

Table 2. Production Activity Indicators for Swine Breeding Complexes of Various Type-Sizes

	number of complexes in group	average daily weight gain, grams	expenditures per quintal of increment		net cost per quintal of live weight gain, in rubles		profitability level, in percent	
			labor, man-days	feed, in quintals of fodder units	labor, in rubles	feed, in rubles	level, in percent	level, in percent
12,000 head	14	292	12.8	7.5	137.8	23.6		
24,000 head	11	348	8.0	7.0	131.9	34.7		
54,000 head	7	378	5.6	6.0	123.5	40.3		
108,000 head	18	432	3.2	4.9	97.0	52.4		

Table 3. Relationship of Live and Embodied Labor Expenditures on Complexes of Various Sizes per Quintal of Live Weight Gain, in rubles

	wages		current material expenditures		cost of fixed assets per livestock- quintal of live weight gain		calculated expenditures	
	direct	indirect total	labor	feed	place	live weight gain	level, in percent	level, in percent
12,000 head	16.0	9.0	25.0	112.8	357	372	182.4	
24,000 head	8.9	10.0	18.9	113.0	351	350	173.9	
54,000 head	6.0	11.2	17.2	106.3	368	306	160.3	
108,000 head	3.4	8.8	12.2	84.8	401	262	128.5	

The economic effectiveness indicators at complexes for 108,000 head are significantly higher than at complexes of all the other type-sizes. However, given the importance of the indicators calculated, they do not provide an exhaustive evaluation of the national economic effectiveness of production, since they do not contain data on change in the relationship of expenditures of live and embodied labor.

The systematic intensification of production has been accompanied, as is known, by a substantial increase in fixed assets and current material expenditures. The structure of expenditures in which the proportion of embodied labor is growing has changed appreciably. Under these conditions, the increase in the productivity of social labor, which is a generalizing, synthetic indicator of production effectiveness, can be judged only on the basis of the reduction in aggregate expenditures of live and embodied labor per unit of output. It is still very difficult to calculate these expenditures in units of working time, due to the complexity and imperfection of existing methods of calculation. At present, the practice of calculating aggregate expenditures in cost terms in the form of calculated expenditures is widespread in economic research. We used this method to analyze the efficiency of complexes of various type-sizes (Table 3, preceding page).

It is evident from the data in Table 3 that as the size of the complex increases, the proportion of live labor in the aggregate expenditures decreases and the proportion of embodied labor grows, in which regard aggregate expenditures per quintal of live weight gain for pork decrease.

Experience in operating large state complexes fully supports the known patterns of development of the economy which are inherent to the intensive form of reproduction, which consist of outstripping growth in production volume as compared with growth in expenditures, thanks to which specific outlays decrease. One confirmation of that pattern is the fact that one-time capital investments in complexes for 108,000 head are 10-12 percent higher per livestock-place, but 25-30 percent lower per unit of output. In this connection, it should be noted that the generally used method of planning capital investment normatives by calculating per livestock-place must be supplemented by the normative of capital investment per unit of output, which is a determining indicator. It was pointed out at the 25th Party Congress that capital investments must not be allocated in a general way, for new projects, but for planned output increment.

The high production efficiency at the large complexes results from the following main causes. Foremost, from the advantage of production concentration itself, thanks to which an opportunity is afforded for implementing more systematically the fundamental demands of industrial technology. This is achieved, in particular, because the time involved in forming technological groups is significantly reduced at large complexes, ensuring greater livestock homogeneity: at complexes for 108,000 head, the technological groups are formed in 1.5 to two days, at complexes for 54,000 head -- in not less than four days, and at complexes for 12,000 head -- in not less than 16 days. Moreover, the high level of production concentration enables us to use improved machinery and equipment, as well as to realize other advantages associated with the concentration of management, transport, maintenance, supply and marketing, construction and so forth.

Feed-supply conditions have a great influence on production efficiency. It is known that the large complexes (for 108,000 and 54,000 head) are supplied with mixed feed from state resources, but the smaller complexes (for 12,000 and 24,000 head) are

provided with feed basically through their own production. Funded supply will doubtless create more stable conditions for organizing livestock feeding. However, the data from the analysis show that, given identical feed supply conditions, as is the case on complexes for 108,000 and 54,000 head or those for 12,000 and 24,000 head, there are still substantial differences in production efficiency as a function of level of concentration. Moreover, complexes for 12,000 and 24,000 head use the exact same concentrated type of feeding: according to Central Statistical Administration reporting data, the proportion of concentrated feeds in the diets of livestock in these complexes exceeds 90 percent. Grains are fed them, but sometimes without proper preparation. In this connection, we anticipate the accelerated development of mixed feed industry and an increase in mixed feed production of sovkhoses, kolkhoses, interfarm enterprises and associations. Given such conditions, the differences in feed base organization at complexes of different sizes might be eliminated.

Comparatively high indicators have been achieved at the large state complexes. However, not all of them are making full use of their opportunities for further improving efficiency and work quality. The Kuznetsovskiy, Krasnogorskiy, Luzinskiy, Chistogorskiy, Vostochnyy and other complexes which have reached full planned capacity are selling the state 12,000 to 13,000 tons of pork annually, and the Il'ingorskiy -- more than 25,000 tons. The average daily weight gain for swine at these complexes reaches 625-630 grams, or 32 percent more than on average for enterprises of this same type-size. Feed expenditure per quintal of weight gain is 4.5 quintals of fodder units, or 10 percent less, labor expenditures do not exceed 2.5 man-hours, and net cost is 81-82 rubles, or 17 percent less. The source of continued improvement in production efficiency at these complexes is now not only and not even so much a matter of reducing expenditures of live labor as of saving embodied labor, which is associated foremost with growth in the productiveness of the livestock and with reducing specific feed expenditure.

In stockraising, one of the primary conditions for increasing production efficiency is the genetic potential of livestock productiveness, that is, the ability of the animal to use material resources, and feed first of all, with the greatest yield. Creating highly productive livestock on a basis of modern breeding practices and, no less important, working out and introducing industrial technology whose use will actualize to the maximum the potential of the animals are therefore a most important direction of scientific and technical progress and an essential condition for industrial stockraising.

There are also derived indicators which also enable us to prove the doubtless advantages of larger complexes. For example, on complexes for 12,000 and 24,000 head, the time needed to raise and fatten the animals is 380 days, and on complexes for 108,000 head -- 250 days; the herd turnover coefficients are 0.96 and 1.46, respectively.

In spite of the obvious advantages of larger complexes, in the practical planning of construction to be done using state allocations preference is often given to smaller complexes. Building large complexes is undoubtedly more complicated. It requires strengthening and broadening the construction base, improving the production of technological equipment and creating a stock of purebred swine. However, all this is needed regardless of the type-size of the complexes. Reference is often made to shortages of grain forage and mixed feed. In fact, the large complexes are a means of ensuring a significant savings in feed.

The research done testifies to the fact that pork production at large complexes can become a substantial and very effective factor in solving the meat problem.

From the editors. The article by I. Dubinskiy demonstrates the effectiveness of concentrating swine breeding at large state complexes, of introducing industrial technologies into the branch. At the same time, every opportunity must be used in resolving the task of increasing meat production in the country. The CPSU Central Committee draft "Basic Directions of USSR Economic and Social Development in 1981-1985 and up to 1990" for the 26th CPSU Congress points out the necessity of "intensively developing swine breeding, expanding the capacity of industrial-type swine-breeding enterprises. Make better use of opportunities for producing pork on nonspecialized farms and private subsidiary plots." The experience of the Baltic republics testifies to the great reserves for increasing meat production on nonspecialized farms. For example, experience in renovating and expanding existing farms, bringing annual production on each up to 400-600 tons of pork, has been widely disseminated in the Estonian SSR. The introduction of progressive technology ensures comparatively high production efficiency at minimal capital investment; questions of providing swine breeding with feed produced themselves are being resolved intelligently here.

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AGRO-ECONOMICS AND ORGANIZATION

SUBSIDIARY FARMS IN INDUSTRIAL ENTERPRISES NEGLECTED

Minsk SOVETSKAYA BELORUSSIYA in Russian 17 Mar 81 p 2

[Article by N. Dym, special correspondent of SOVETSKAYA BELORUSSIYA: "In the Mire of Agreements"]

[Text] Improvement in the supply of food products for the population is one of the main tasks of the 11th Five-Year Plan. "Basic Trends in the Economic and Social Development of the USSR for 1981-1985 and for the Period Until 1990" pay considerable attention to an increase in the production of all types of agricultural products. Subsidiary farms of enterprises, organizations and institutions should make an important contribution to the implementation of the food program.

The decree of the oblast party committee "On Subsidiary Farms of Enterprises, Organizations and Institutions" adopted at the beginning of 1979 was directed toward a search for food reserves in Minskaya Oblast. It outlined specific tasks for the further development of rural shops in plants and factories and increase in the production of livestock and plant products in them. The decree also envisaged the development of new subsidiary farms, primarily in large industrial enterprises.

To be sure, for enterprise managers the construction of such farms was an equation with many unknowns: From whose experience to learn? How to solve personnel and material and technical supply problems? However, the fact that the entire output of the rural shop would be used for the needs of the industrial workers themselves was attractive to them. Who does not want to see fresh dairy products, vegetables and fruits in workers' restaurants all year round?

"By establishing such a subsidiary farm," says V. I. Alisevich, deputy director for domestic services of the Minsk Motor Vehicle Plant, "we hope to improve the nutrition of small children in nurseries and kindergartens, not only of enterprise workers. The plant rest base, preventive clinics and the pioneer camp also need a rich assortment of dishes..."

The motor vehicle plant is one of Minsk's advanced enterprises. For example, output worth 444.4 million rubles was produced there. The entire increase in the volume of manufactured motor vehicles, spare parts, articles based on cooperation and consumer goods was ensured as a result of labor productivity growth. The annual profit of this enterprise totaled millions of rubles. The Minsk Motor Vehicle Plant also attained good results during previous years, so it has sufficient funds to put a subsidiary farm on the plant's balance.

"Only our decision soon fell into the mire of all kinds of agreements," says V. I. Alisevich. "At first we negotiated the allocation of land to the plant with the management of the Volma Sovkhoz in Minskiy Rayon. We tried to coordinate the matter with the rayon party committee and the rayon executive committee. But a rejection came from there. We were told that land on the Volma Sovkhoz was fertile and the farm increased the production of agricultural products year after year. It was suggested that we continue our search for areas on the Pravda Sovkhoz in Minskiy Rayon. We returned from there with an agreement on the granting of land of the brigade in the village of Lisovshchina to the Minsk Motor Vehicle Plant."

Vladimir Ivanovich opened the folder and showed a letter signed by plant director I. M. Demin addressed to the Minskaya Oblast Party Committee. It contained a request to assign the brigade of the Pravda Sovkhoz to the enterprise. The letter stated that workers intended to engage in the fattening of 200 head of large-horned cattle and, subsequently, of hogs as well on the subsidiary farm.

"Are you interested in knowing what happened next?" asked V. I. Alisevich and he answered right away: "Again a rejection."

However, even this did not diminish the desire of workers at the motor vehicle plant to have their own subsidiary farm. Now they are requesting an allocation of land at least for hothouses. They have been looking for areas in Berezinskiy Rayon. It is not known how the problem will be solved. It is still being coordinated in the oblast executive committee and the Belorussian SSR Ministry of Agriculture.

The request of workers at the Minsk Tractor Plant to transfer land to the enterprise for the organization of a subsidiary farm also fell into the mire of agreements. The management of the Selishche Pedigree Stock Farm volunteered to allocate 347 hectares. In order that the Minsk Tractor Plant may receive this plot, in addition to the desire of the plant personnel, consent of the farm and permission of rayon bodies, it was necessary to obtain the approval of the management of agriculture of the oblast executive committee. Such a decision was made and after a long journey through the offices of various officials the documents of workers at the tractor plant were submitted to the Belorussian SSR Ministry of Agriculture for approval. The ministry considered it necessary to consult the oblast pedigree stock trust. The managers of this trust objected to the transfer of part of the land of the Dashki Brigade on the Selishche Sovkhoz to the enterprise.

Later the tractor plant received the order-decree of the board of the USSR Ministry of Tractor and Agricultural Machine Building and of the central committee of the sectorial trade union "On Tasks for the Further Development of Subsidiary Farms and on This Basis Improvement in the Provision of Workers at the Sector's Enterprises and Organizations With Food Products." The document made it incumbent upon the Minsk Tractor Plant to conclude a contract for the purchase of 975 hectares of land on one of the farms. P. I. Boykov, director of the Minsk Tractor Plant, and K. N. Bleshchik, his deputy, again went to Logoyskiy Rayon. They found support on the Slava and Semkovo sovkhozes. Each farm was ready to give the plant more than 1,000 hectares of agricultural land. Again papers went through the chain plant-kolkhoz-rayon party committee-executive committee-administration of agriculture of the oblast executive committee-Belorussian SSR Ministry of Agriculture. A long

time will pass before they are countersigned appropriately. And if someone does not give his consent? Then the establishment of a subsidiary farm in one of the oblast's largest enterprises will again remain undecided and, consequently, both the decree of the Minskaya Oblast Party Committee and the order of the Ministry of Tractor and Agricultural Machine Building will remain unfulfilled.

Industrial enterprises consider it strange that they themselves have to look for areas suitable for the establishment of rural shops. As a rule, such a search begins on farms under their patronage, but does not always end successfully. Enterprise managers complain: Why should the administration of agriculture of the oblast executive committee not prepare a list of recommended kolkhozes and sovkhoses, which would attract the attention of enterprises? At the same time, this list should, of course, be coordinated with the republic's Ministry of Agriculture.

The Minsk Plant imeni Vavilov, the Minsk Refrigerator Plant, the Dormash and Minsk-promstroy associations and the Molodechno Semiconductor Valve Plant, which decided to acquire subsidiary farms, also found themselves in the position of the motor vehicle builders and tractor plant workers.

The managers of the bearing plant, the Integral Association, the Stroymekhanizatsiya and Molodechnosel'stroy trusts and the Chervenskiy Rayon Union of Consumer Societies had to go through a long process of agreement before, finally, it was decided to allocate land to them.

The adopted decree of the CPSU Central Committee and the USSR Council of Ministers "On Subsidiary Farms of Enterprises, Organizations and Institutions" determines efficient measures for the further development and organization of such farms. It envisages the allocation of plots from state reserve and forest land and meeting the needs of subsidiary farms for high-quality seeds and young pedigree stock. Agricultural machinery, equipment and spare parts should be allocated in accordance with the procedure established for kolkhozes and sovkhoses. It would seem that the initiative of industrial enterprises for the organization of subsidiary farms should be supported in every possible way. After all, finding food resources will make it possible to improve the supply of food products for workers. However, enterprises, organizations and institutions in Minskaya Oblast do not yet feel any help on the part of party bodies, executive committees of soviets of people's deputies and trade union organizations.

"Our plant," says K. N. Bleshchik, deputy director for domestic services of the Minsk Tractor Plant, "has received several directives from superior organizations on the establishment of a subsidiary farm. Although the process of agreement on the transfer of land to the plant still continues, nevertheless, we hope for a positive result. But let us assume that we will receive permission soon. What next? How will this land be transferred? What should be done with the structures and livestock? After all, a kolkhoz or sovkhos is not interested in giving an enterprise its livestock or barns. As far as I know, the farm's production plan is not reduced in this case and it must be fulfilled. Other problems also arise: Where should an enterprise get agricultural specialists, manpower, machinery, equipment, spare parts, fertilizers and seeds? Finally, the organization of subsidiary farms will require credits. Who will provide them? Who should coordinate all the problems of organization of subsidiary farms in enterprises? It is also necessary to develop a standard statute on subsidiary farms.

All these problems are the stone with the sharp edges over which the managers of the bearing plant and of the Integral Production Association stumbled. It was permitted to transfer the land of the Novyy Sovkhoz in Minskiy Rayon and of the Uzdenskiy Sovkhoz in Uzdenskiy Rayon to these enterprises. For example, workers at the bearing plant intend to grow grain crops, potatoes and vegetables on 499 hectares. Plans are made to fatten 400 head of large-horned cattle and to obtain 600 tons of meat annually. However, this is merely an estimate. For the time being, there are many unsolved problems. It is not easy to solve them. Party bodies and executive committees of city and rayon soviets of people's deputies should provide help. For example, it is possible to issue a poster or pamphlet with a description of the experience in the establishment of a rural shop at one of the plants in the republic or country, or to organize a visit to such an enterprise. Recently, builders from the vehicle plant visited a motor plant in Yaroslavl', where there is a well-organized subsidiary farm. Workers from the tractor plant are planning a trip to gain experience at the optical instrument association in Leningrad. Their report on the visit would interest many managers. Such a meeting needs only to be organized.

Today there is no need to demonstrate how important it is to establish subsidiary farms in enterprises, organizations and institutions. This is a necessary thing. To develop rural shops and to form new ones, especially in large industrial enterprises, is the task of the day.

As yet not much has been done in Minskaya Oblast. Although the decree adopted by the oblast party committee determines specific tasks and specific executors, nevertheless, it is not being fulfilled. A series of problems connected with the organization and management of subsidiary farms arise in enterprises, organizations and institutions. The oblast party committee has not supervised the adopted decision thoroughly and has not carried the useful work which has started to its conclusion.

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CSO: 1824

RAYON LINK ARTICLE ELICITS READER RESPONSE

Moscow SEL'SKAYA ZHIZN' in Russian 14 Feb 81 p 2

[Article by V. Biryukov: "Strengthen the Rayon Link--A Review of Reader Response"]

[Text] "The Rayon Link"--such was the title of an article written by N. Bargentsov, First Secretary of the Pritobol'nyy Rayon Party Committee of Kurganskaya Oblast, which was published in the 7 Feb 81 issue of SEL'SKAYA ZHIZN'. Its author, in analyzing the system for the management of agriculture which is now taking shape on the local level, cited examples of estrangement and red tape in the leadership of kolkhozes and sovkhoses and in the enterprises and organizations which serve them. The article proposes insertion in the draft of Basic Trends the idea of the need for over-all state measures aimed at overcoming such organizational splintering, the need for the basic improvement of agricultural industry complexes, particularly improvement of its rayon link.

Many readers of SEL'SKAYA ZHIZN' expressed the same opinion in their letters. "Improvement of management is one of the most pressing problems in our rural areas," First Secretary A. Kulov of the Kirovskiy Rayon Party Committee of the Severo-Osetinskaya ASSR wrote to our editors. "Everyone understands that the stepped-up development of agriculture should be facilitated on the local level by enterprises of Goskomsel'khoztekhnika, of the Ministry of Land Reclamation and Water Economy, of Sel'khozkhimiya, and of construction and procurement organizations. However, all of them are subordinate to their own trusts, associations and administrations, while their work is judged on the basis of indicators which are not linked directly to the end result of agricultural production. One would think that the time is now ripe to unite the efforts (in an organized manner) of all links of the agricultural industry complex in rural areas and to conduct this work during the 11th Five-Year plan period, something which I propose be inserted in the Basic Trends draft."

"Such a structure of management, under which all enterprises and organizations having a direct relation to agriculture are subordinate to a single agency, would be highly effective," P. Feshchenko and G. Malyarenko, candidates of economic sciences from Kiev, state in their letter. "Bearing witness to this is the many years of work experience of the Vil'yandinskiy (Estonia SSR), Talsinskiy (Latvian SSR), Abashskiy (Georgian SSR) and other rayon associations. Evidently, the time has now come to move beyond our experiments to a planned reorganization of agricultural management on the basis of the creation in every rayon of a single agricultural industrial complex."

Many letters touching upon this important problem emphasize the fact that, in the process of improving the management of agriculture, it is necessary to be guided by the ideas which were expressed at the October (1980) Plenum of the CPSU Central Committee. As is known, the essence of these ideas is to have the agricultural industry complex planned, financed and managed as a single unit.

Among the letters to the editors is one in which the authors devote their main attention to the main link of the agricultural industry complex--to agriculture directly and to the management of this branch of our industry. "On a rayon-wide scale, there is separateness which exists not only in the mutual relations between kolkhozes and sovkhozes, on the one hand, and the organizations which serve them, on the other," reader N. Petrov writes from Lipetskaya Oblast. "Red tape flourishes also in agriculture itself." What we are speaking about, the letter goes on to say, has to do mainly with so-called trust outfits which, as distinct from kolkhozes, are not subordinate to rayon agricultural administrations, which leaves a gap in the planning and material-technical supply of agricultural organizations.

Under such a situation, there is an increase in the burden placed upon specialists of the rayon agricultural administration, a burden which has an effect on the quality of their work," Chief Economist I. Sluzhavyi of the Agricultural Administration under the Tokmakiy Rayispolkom of Zaporozhskaya Oblast noted. "Both the number and the wages of the workers of this agricultural agency," the letter says, "are established on the basis of the planned volume of sale to the state of products raised both by people and by farms. However, in doing this, only the figures provided by kolkhozes are taken into consideration."

"Meanwhile, all reports on production and on the fulfillment of plans for state procurement pass through the hands of rayon agricultural administration specialists. They are the ones who analyze the situation in agriculture and in animal husbandry. It is they who are responsible, regardless of the farm organization's departmental subordination, for introducing into production the latest achievements of science and of advanced experience, for the condition of livestock breeding work and the artificial insemination of cattle. It is upon these workers of the land-management department and of the Gossel'tekhnadzor Inspectorate that responsibility is placed for fulfillment of the corresponding directives throughout the territory of the rayon, including sovkhozes which may not be subordinate to them. Where is the logic in this?"

On this question, the opinion of the readers was unanimous--all farm organizations, including specialized sovkhozes, should be subordinate to a single rayon agency for the management of the agricultural industry complex on the local level.

"It is important that work connected with improving the management of agriculture go hand in hand with improvement of leadership of the kolkhoz-sovkhoz economy, with improvement of the qualifications of specialists and with radical change in the style of their activities," A. Samoilenko, an economist from L'vov, states in his letter. "Unfortunately, very little attention is being devoted to this aspect of the problem. As a consequence, results suffer."

The author of that letter cites this example. At the end of last year, the CPSU Central Committee and Council of Ministers USSR Decree was adopted entitled "On

Improving the Planning and the Economic Stimulation of Agricultural Production and Procurement." Acknowledged particularly in this important document was the incorrect practice wherein kolkhozes and sovkhoses take on assignments which have not been provided for them in state plans. However, A. Samoylenko writes, rayon agricultural agencies continue to serve upon these farm organizations such indicators as the structure and size of areas to be planted to crops, the number of head of cattle, procurement volume and the application of organic fertilizers, etc.

"Direct, personal contact is often replaced by paperwork, and this is characteristic not only of rayon agricultural administrations," Senior Agronomist S. Kuznetsov of the Sochi Vegetable Growing Industry Trust shares his thoughts with us in a letter. "Agricultural agency specialists spend an unjustifiably large amount of their time engaged in paperwork. Such a work style does not allow us to devote paramount attention to tasks connected with raising the arability of land. It is time to cast off such work methods and to devote more time to being involved directly in questions which have to do with production."

V. Ivanov from the city of Sol'tsov in Novgorodskaya Oblast writes to tell us of the active influence upon the economy of kolkhozes and sovkhoses of rayon agricultural administration specialists and how that influence is still being interfered with by poor communications--telephone and radio--with agricultural organizations. He proposes that the following be inserted in the draft Basic Trends: "There should be set up in the course of the 11th Five-Year Plan period, this in all agricultural regions, modern operational-dispatcher communications between agricultural administrations and kolkhozes and sovkhoses and their subdepartments."

Other letters raise questions involving improvement in the transport services being provided workers of rayon agricultural administrations, establishment of a closer tie between payment for their work and production end results. At the same time, a number of readers propose increasing the responsibility of rayon link leaders and specialists as to fulfillment of state plans and socialist obligations.

Every such letter is an example of the creative activity of our readers, of their concern for improving the management of agriculture and the agricultural industry complex as a whole. Raising the operational capability and the quality of leadership and the elimination of shortcomings in this matter will facilitate an increase in production and in the sale of state products derived from fields and farms.

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CSU: 1824

TILLING AND CROPPING TECHNOLOGY

FURTHER REPORT ON ALL-UNION AGROCHEMICAL CONFERENCE IN MINSK

Moscow ZASHCHITA RASTIENIY in Russian No 2, Feb 81 pp 7-9

[Article: "More Responsibility for Assigned Jobs". A similar report appeared in JPRS 77166/1264, dated 14 Jan 81 pp 23-35]

[Text] The intensification of agriculture in our country takes place on the basis of mechanization of production processes, chemization and land reclamation. Chemization is now a primary factor in increasing the productivity of the fields. Experience shows that about half of the increase in productivity of agricultural crops is achieved as a result of the application of fertilizers and chemical means of plant protection. It is this that explains the immense attention that the party and government are devoting to this important problem.

It was emphasized at the 25th CPSU Congress and the July (1978) Plenum of the CPSU Central Committee that the chemization of agriculture is one of the most important parts of the party's agrarian policy in the modern stage. Speaking at the October (1980) Plenum of the CPSU Central Committee, Comrade L. I. Brezhnev noted: "...We must sharply increase the demands that we make so that the allotted funds, mineral fertilizers and technical equipment are utilized intelligently and efficiently on the kolkhozes and sovkhozes and so that they will produce a maximum return." These words pertain primarily to workers of the consolidated agrochemical service.

How does one increase the effectiveness of funds for chemization and what must be done to improve the agrochemical service for the kolkhozes and sovkhozes? These questions were discussed at the All-Union Seminar-Conference that took place during 18-20 November of last year in Minsk. Participants in it did a thorough analysis of the production and scientific activity of Sel'khozkhimiya during the year that had passed since the creation of a consolidated specialized service in the country, and the earmarked ways of increasing the effectiveness of the chemization of the country's agriculture.

Attending the All-Union Seminar-Conference were responsible workers of parties, soviets and agricultural agencies of the republics, krays and oblasts, representatives of a number of ministries and departments, and managers of Sel'khozkhimiya associations and republic plant protection services, as well as scientists. Participating in the work of the seminar-conference were: T. Ya. Kiselev, candidate member of the Politburo of the CPSU Central Committee, first secretary of the Central Committee of the Communist Party of Belorussia; A. N. Aksenov, chairman of the Belorussian

SSR council of ministers; I. K. Kapustyan, deputy chief of the agricultural division of the CPSU Central Committee; and M. S. Khozyainov and V. S. Martynovskiy, sector chiefs of the CPSU Central Committee.

Speaking before participants in the seminar-conference, the secretary of the Central Committee of the Communist Party of Belorussia, N. I. Dementey, discussed the work that is being done in Belorussia to improve the agrochemical service for the kol-khozes and sovkhozes. Effective use of means of chemization is a reliable starting point for further intensification of farming, its increased regularity and increased production of agricultural products.

V. P. Nikonov, chairman of the Soyuzsel'khozkhimiya and USSR deputy minister of agriculture, gave a paper entitled "The Results of the First Year's Works and Tasks for Further Improvement of the Country's Unified Specialized Agrochemical Service." He noted that the creation of a consolidated agrochemical service in the country is yet another indication of the constant concern of the party and government for further advancement of agriculture. Agrochemical subdivisions in the majority of union republics, krays and oblasts are increasing their work volumes and have proved themselves to be reliable partners of the farmers. Even now the association is doing practically all the work for extracting local materials containing lime and gypsum, applying lime and gypsum to the soil, a considerable part of the work for extracting peat for fertilizers and shipping organic fertilizers, and almost one-third of all the volume of application of mineral and organic fertilizers and the application of means of plant protection. The association supplies farms with all of their fertilizers, pesticides, feed supplement and other chemical preparations.

V. P. Nikonov especially emphasized the role of chemistry in the further development of agriculture and the improvement of the supply of foodstuffs for the country's population.

There is still a good deal to do for improving the utilization of fertilizers, chemical treatments and pesticides. A number of regions of the country do not efficiently use fertilizers applied to grain crops, sugar beets, potatoes and vegetable plants; they do follow recommendations for their efficient utilization; and they allow losses during storage and shipment. It is necessary to devote more attention to questions of efficient utilization of means of chemization when raising agricultural crops according to industrial technology.

Experience shows that large yields are obtained only in places where they carry out the entire complex of measures directed toward increasing the fertility of the land with the help of fertilizers, treatments, means of plant protection, growth regulators and so forth.

In his paper, V. P. Nikonov devoted a good deal of attention to questions of improving the work of the plant protection service and to intelligent and efficient methods and means of protecting the crops from pests, diseases and weeds. The role of the plant protection service increases especially during a period of intensive intensification of agriculture, specialization and concentration of production with industrial technology for raising agricultural crops.

It is necessary to introduce integrated systems of plant protection into production more actively, to ensure a maximum return from each kilogram of pesticides, and to utilize them efficiently in combination with other devices and methods. It will be

necessary to satisfy the farm's demand for chemical means of plant protection more fully and to develop biological methods more extensively. There are still many shortcomings in the utilization of pesticides, and especially herbicides. A considerable quantity of chemical means of fighting against weeds are not used, they remain in the storehouses, and they lose their effect. Such inefficiency causes great harm to the state. Frequently rules are not observed for applying pesticides, especially in the proper doses and at the proper time for their utilization. Mechanized detachments of Sel'khozkhimiya are still not doing enough work for plant protection, and the construction of treatment areas and solution units is proceeding slowly. There is lack of coordination in the work of subdivisions of the agrochemical service, and many farms do not make charts of the fields for salinization, which impedes the efficient utilization of herbicides. The plant protection service should devote more attention to the organization of agricultural measures on the farms and actively influence the efficient and intelligent utilization of all means for protecting the crops. Production workers are also expecting more from scientists with respect to the development of reliable methods of plant protection, the improvement of the assortment of pesticides, integrated programs and protection of the environment.

Also speaking at the conference were: G. G. Kovalenko, deputy chairman of the Belorussian SSR Council of Ministers; V. M. Bel-chenko, chairman of Rossel'khozkhimiya; S. V. Lutsenko, secretary of the Khar-kovskaya Obkom of the Communist Party of the Ukraine; T. N. Kulakovskaya, Hero of Socialist Labor, academician-secretary of the Western division of VASKhNIL; N. A. Ponomarev, Hero of Socialist Labor, chairman of Kassel'khozkhimiya; N. S. Ykushev, secretary of the Minskaya Obkom of the Communist Party of Belorussia; N. S. Mukhin, chairman of the Moscow Sel'khozkhimiya Association; V. I. Bayda, chief of the Cherigovskaya zonal agrochemical laboratory; Ye. V. Kozlovskiy, director of the Leningrad branch of the TsINAO; Yu. A. Kolomiyets, first deputy chairman of the Ukrainian SSR Council of Ministers; T. P. Ignashov, secretary of the Krasnoyarskiy Kray CPSU Committee; B. A. Andreyev, chairman of the Tambovskaya Oblast Sel'khozkhimiya Association; A. N. Davidenko, deputy chairman of the Goskomsel'khoztekhnika; A. S. Myshelova, senior scientific worker of the Belorussian SSR Institute of Economics of Agriculture; A. A. Mavlov, chairman of the Buryat Sel'khozkhimiya Association; Ya. V. Aleksankin, chairman of the Kolkhoz imeni Kalinin in Nesvizhskiy Rayon in Minskaya Oblast, and others.

In the speeches it was emphasized that more attention is being devoted to extensive chemization of agriculture on the part of party, soviet and agricultural agencies. The significance of comprehensive chemization under modern conditions was noted. The concrete work experience of the agrochemical service was discussed, and shortcomings and reserves were revealed.

The speakers discussed the position and role of the country's consolidated agrochemical service. In a number of places they are still trying to retain the old work procedures--to give recommendations and not to bear responsibility of the condition of the chemization in one zone or another. One cannot return to this former position. The Sel'khozkhimiya associations are responsible for chemization in rayon, oblast, kray or republic. It is necessary to restructure the work as quickly as possible and transform Sel'khozkhimiya into a monolithic service. The agrochemical service should organize efficient and effective utilization of mineral and organic fertilizers and means of plant protection. From recommendations to the organization of special jobs and the application of progressive methods and means--such should be the forms of the

service's activity. Sel'khozkhimiya and not the contractor is the agricultural subdivision that bears responsibility for chemization. What is good and useful for the farm should be good for the agrochemical service as well, for it was created in order to increase productivity.

The speakers discussed the need to develop a comprehensive program for increasing the fertility of the land and for strict observance of technological discipline in applying means of chemization and storing fertilizers and pesticides. It was emphasized that industrial technology for the cultivation of agricultural crops advances to the foreground questions of applying fertilizers and means of plant protection.

In Moldavia, for example, there is widespread interfarm cooperation for chemization. As an experiment, combined chemization points were created in five rayons--for fertilizers and plant protection, including the biological method. Sel'khozkhimiya is doing about 50 percent of the work for plant protection in the republic. This makes it possible to save up to 15 percent of the pesticides which are in short supply. One chemization point in Moldavia is assigned 15,000-20,000 hectares, and it serves 4-5 farms. In the Ukraine, where there are more than 75,000 people working in the Sel'khozkhimiya association, a long-term program has been developed for further development of the agrochemical service, including for plant protection.

Many speeches dealt with the role of science in increasing the effectiveness of chemization and accelerating the progress of farming. It will be necessary to develop scientifically substantiated systems for the application of chemical means in various zones, taking into account the strains of the intensive type, and to work out questions of strain agrotechnology.

The need to assign personnel to Sel'khozkhimiya associations was noted. It was suggested that a system be developed for evaluating the activity of the associations not only in terms of the work that has been done, but also in terms of the yields that were received, that is, to link earnings to final results.

The deputy chief of the agricultural division of the CPSU Central Committee, I. K. Kapustyan, spoke at the seminar-conference. He emphasized the role of the party's agrarian policy and the importance of the decisions of the July (1978) and October (1980) Plenums of the CPSU Central Committee in the further development of agricultural production. He analyzed the results of the work of farmers under the Tenth Five-Year Plan and discussed the tasks and problems facing agricultural workers under the new Five-Year Plan. I. K. Kapustyan devoted special attention to increasing the production of grain and other plant growing products as well as the development of agriculture in the Non-chernozem zone, Siberia and the Far East.

There are still a number of regions where, in spite of large capital investments, the production of agricultural products is still increasing very slowly or is not increasing at all. One cannot be reconciled to this. At the October (1980) Plenum of the CPSU Central Committee they especially emphasized the role of chemization in increasing the productivity of the fields. For the correct application of fertilizers and means of plant protection makes it possible, in a number of cases, to even double the yield. This is convincingly shown by the experience of Belorussia.

By a decision of the July (1979) Plenum of the CPSU Central Committee a consolidated agrochemical service was created in the country and it has already done a great deal of work. But the establishment of the service has been held up in a number of

places. It is necessary to help Sel'khozkhimiya to utilize capital investments and material and technical resources efficiently. In the very near future Sel'khozkhimiya must assume all functions of chemization in the country.

I. K. Kapustyan noted the need for extensive dissemination of the experience of Khar'kovskaya Oblast in creating a comprehensive program for chemization under the new Five-Year Plan and evaluated highly the work of Belorussia for the assimilation of capital investments for chemization.

Not all associations have as yet restructured their work in light of the decisions of the July (1978) Plenum of the CPSU Central Committee, and they are not taking responsibility for the application of fertilizers and means of plant protection. The criterion for evaluating the work of the agrochemical service should be not profit, but productivity.

In his speech I. K. Kapustyan devoted a great deal of attention to the work of the service for plant protection which has existed for many years and has proved itself. There are now increased requirements for specialists in this profile. They must fully satisfy the demands of production and closely coordinate their activity with that of other subdivisions of Sel'khozkhimiya. The production of chemical and biological means of protecting the crop is increasing each year and it is necessary to use them and organize reliable protection of the plants from pests, diseases and weeds in an intelligent and efficient way.

One should disseminate the experience of Tadjikistan in extensive introduction into production of an integrated system of plant protection.

In conclusion I. K. Kapustyan emphasized that the party's strategic slogan--the struggle for efficiency and quality--should be the slogan of all workers of the country's consolidated agrochemical service.

It was noted in the resolution of the All-Union Seminar-Conference that the chemization of agriculture is a decisive factor in the intensification of agricultural production and the increase in productivity and gross yields of agricultural crops. But there is still much to do for the efficient means of chemical utilization. Under the Eleventh Five-Year Plan it will be necessary to develop and implement specific measures on each farm and in each rayon and oblast for chemization of agriculture, increased productivity of technical equipment and increased return from the application of means of chemization. On large kolkhozes and sovkhozes it is necessary to organize chemization points. They should provide the full volume of work for applying lime to the soil, improving solonchaks land, applying anhydrous ammonia, extracting local lime materials and providing agricultural aviation service. It is intended to maximally increase the volumes of work for shipping and applying organic and mineral fertilizers, and protecting plants from pests, diseases and weeds; to expand the utilization in agriculture to efficient new means of chemization and advanced technology; and to increase the volumes of work by the biological method. It has also been decided to implement other measures directed at fuller and more efficient application of means of chemization as well as improvement of the agrochemical service for the kolkhozes and sovkhozes.

Participants in the conference became thoroughly familiar with the work of the republic Bel'khozkhimiya association for scientifically substantiated utilization of mineral fertilizers, chemical and biological means of plant protection, soil treatment

measures, growth substances and other means of chemization, and they also visited the Minskiy, Stoptsovskiy and Nesvyuzskiy rayon Sel'khozkhimiya associations, the chemization point of the Zhdanovskiy teplichnyy kombinat sovkhoz, the Minskaya Oblast chemization station and the Belorussian Scientific Institute of Soil Science and Agrochemistry.

Bel'khozkhimiya includes six oblasts, one interr rayon and 117 rayon associations, a republic agrochemical laboratory, a republic station for the biological method of plant protection, and a republic laboratory for predicting and diagnosing pests and diseases of agricultural crops. A special council of representatives of scientific research institutes has been created. The Sel'khozkhimiya association carries out agrochemical examination of soils and compiles cartograms of acidity and the soil's supply of nutritive elements. Using electronic computers, it distributes mineral fertilizers and pesticides for the planned yields and develops recommendations for the application of fertilizers and means of plant protection for each farm. It delivers all chemical products and annually applies lime to 1.3 million hectares of acid soil (100 percent), procures 25 million tons of peat (80 percent) for fertilizers, improves 60,000 hectares of less productive land, applies mineral fertilizers to 2 million hectares, protects plants from pests, diseases and weeds on 2 million hectares (70 percent of the area), ships about 27 million tons of organic fertilizers, applies them to the soil, prepares peat compost and performs a number of other kinds of work.

The republic associations have 97 bases for supplying chemical products with an overall capacity of railside storehouses of 960,000 tons and kolkhoz-sovkhoz storehouses of 670,000 tons. They have about 10,000 tractors, 9,200 trucks and other technical equipment. There are 30,000 people working in the association and 4,700 of them are specialists with a higher or secondary education.

The Zhdanovskiy teplichnyy kombinat sovkhoz, which the participants in the conference visited, is one of the leading farms of Belorussia. On an average for the years of the Ninth Five-Year Plan the yields of grain crops amounted to 34.3 quintals per hectare and potatoes--160 quintals per hectare. Under the Tenth Five-Year Plan from each hectare they obtained 31.6 quintals per hectare of grain and 200 quintals of potatoes. The farm is assigned 3,825 hectares of land, of which 2,912 are arable, including 1,983 hectares of plowed land. In the structure of the planted areas grain crops occupy 46 percent, feed crops--35 percent, potatoes--6.6 percent, and vegetables--12.4 percent. The main factor in the increased productivity and production of agricultural products is efficient utilization of fertilizers and means of plant protection.

The chemization point organized in 1975 is a specialized, autonomously financed subdivision of the sovkhoz. It performs all work for shipping organic fertilizers, preparing composts and applying them to the soil, and also for applying mineral fertilizers (20 percent) and plant protection (45 percent). The rest of the work is done with agricultural aviation.

Lime is applied to acid soils and peat is extracted for fertilizers by mechanized detachments of the rayon Sel'khozkhimiya association. The sovkhoz has a landing strip for agricultural aviation during the period of mass top dressing of winter crops, grain crops, perennial grasses, hay fields and pastures, as well as during the period of protection of the plants from pests, diseases and weeds. On the territory of the point there are storehouses for 500 tons of ammonium nitrate,

3,000 tons of mineral fertilizers, 300 cubic meters each of liquid potassium fertilizers and ammonia water and 100 tons of pesticides. A shed has been equipped for storing technical equipment and fuel and lubricants, and facilities have been constructed for specialists and service personnel. The point is manned by three teams (26 machine operators)--for preparing, shipping and applying organic fertilizers; applying mineral fertilizers; and protecting plants. At the pesticides storehouse there is a special point for preparing working solutions of chemical means of plant protection, and it also has an APZh-12 (APK "Temp").

The storehouse for storing pesticides has three parts: one for strongly toxic preparations, another for explosive and flammable substances, and a third is heated. The storehouse has auxiliary premises for disinfection and storage of packaging, a boiler and several residents rooms. The incoming pesticides are stored on shelves or in special containers. The corridor going into the storehouse is equipped with a pulley for loading and unloading preparations. The prepared working solution goes through a special pipe to the sprinkler or aircraft. The liquid remaining after the packaging and APZh-12 aggregate are cleaned goes into a neutralizing well. During the period of application of pesticides the storehouse and the point for preparing the working solutions are manned by four workers. An agronomous agrochemist and another agronomist for plant protection work at the chemization point.

The specialist's room has special literature and technological documentation, including a journal accounting for the treatment of seeds, a journal accounting for the application of pesticides, a sanitation certificate of the right to receive and store chemical plant protection substances, a journal of the income and expenditure of pesticides through the warehouse, technological charts of the protection of plants according to the times, a chart of the weediness of the fields, a plan of measures for fighting against pests, diseases and weeds (annual and for the various work periods), a journal of registration of instruction on technical safety, cards accounting for introductory instruction on technical safety, a medical booklet of the person working with pesticides, and so forth.

During the time of the seminar-conference the participants were around to colorful stands: "Comprehensive System of Plant Protection of Grain Crops From Pests and Weeds," "Protection of Sugar Beets from Pests, Weeds and Diseases," "The System of Measures for Protection of Potatoes from Pests and Diseases," "A System of Measures for Fighting Against Potato Nematodes," "Protection of Flax From Weeds and Diseases," "Protection of Seed Grasses from Pests and Diseases," "The Application of the Biological Method."

The introduction of protection measures recommended by the Belorussian Scientific Research Institute of Grain Plants made it possible to reduce the infestation of planted areas with loose smut of barley to half the former level. Additional chemical treatment of thermally disinfected barley seeds of the Nadya strain made it possible to increase the laboratory germination from 76 to 88 percent, to reduce the infection of the seeds with diseases to one-half and to increase the yield from 43.4 to 46.4 quintals per hectare. The net income was 96.8 rubles per hectare.

And here is another example. The comprehensive system of protection of grain crops that was developed by this institute during 1976-1980 was extensively tested in various agro-climatic zones of the republic. Depending on the level of infestation

with pests and diseases and on the weediness of the fields, from 2.3 to 7.8 quintals of grain were saved. The additional yield of grain from the application of insecticides (phosalon, chlorophous) against Swedish fly and thrips was 4.5 quintals per hectare and the net income was 36.2 rubles per hectare.

The system of measures for protecting potatoes of the Ogonok reduced development of late potato blight by 78.8 percent, increased the output of commercial tubers by 7.5 percent and increased the yield by 58 quintals per hectare. The treatment of area planted in sugar beets with herbicides made it possible to reduce weediness by 78-82 percent, to increase the yield of roots by 50-70 quintals per hectare and to reduce energy expenditures by 5.09 rubles per hectare.

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TILLING AND CROPPING TECHNOLOGY

IMPROVED SEED PROVISION RECOMMENDED FOR NONCHERNOZEM ZONE

Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 81 p 2

[Article by E. Nettevich, corresponding-member of VASKhNIL [All-Union Lenin Academy of Agricultural Sciences] and by S. Borshch, director of the Main Administration for Grain Production of the RSFSR Ministry of Agriculture: "Seed for Spring Sowing"]

[Text] Last year the harvesting operations proceeded under difficult conditions. Frequent rains hindered the work of equipment and as a result harvesting operations in the Nonchernozem Zone were behind schedule. The moisture content in threshed grain exceeded 30-40 percent. The seed was severely traumatized and was subject to harmful microflora. Because of this in many enterprises seed was unconditioned.

It became necessary to import large amounts of seed from other regions of the RSFSR. This was a forced measure. It is essential to keep in mind that the varieties of barley, oats and spring wheat regionalized in southern and steppe areas are noticeably inferior to varieties that have been created for the Nonchernozem Zone. The difference in productivity of imported and local varieties can be considerable.

We are worried also about the fact that in recent years for a number of subjective and objective reasons there has been a tendency in Severo-Zapadnyy, Volgo-Vyatskiy and Tsentral'nyy rayons to decrease the proportion of regionalized varieties in crop stands. According to the data of the RSFSR TsSU [Central Statistical Administration], in 1980 96-99 percent of grain crops were of good quality, as were 84-86 percent of pulse crops. On the surface the situation seems to be satisfactory. However, among the quality crops a significant portion is not regionalized and is consequently less productive. Thus, in Tsentral'nyy Rayon, of the 2.5 million hectares of barley crops here over 27 percent were steppe varieties Nutans-187, Nutans-106, Submedikum-199 and others that are not very useful in this region.

Of the more than 500,000 hectares of quality crops of spring wheat over one-third of the area was occupied by non-regionalized varieties. For oats this figure was 14 percent, for buckwheat--over 14, and for millet--87 percent. To these we must add the old varieties that do not have a place in seed farming any longer, which occupy 8 percent of the total area. Thus, over one-fourth of the area in grains, pulse crops and groats in Tsentral'nyy Rayon was sown in non-regionalized, less productive varieties last year. We find the same picture in other areas of the

Nonchernozem. This year the proportion of less productive varieties will increase even further because of the aforementioned reasons.

How can this extremely irregular situation be explained? First of all, most of the enterprises in the zone are poorly supplied with drying technology. There has been an undervaluation of quality seed farming and a very slow transition to an industrial base. The importation of large parcels of seed into the Nonchernozem from other zones has become a chronic disease. The directors and specialists of many kolkhozes, sovkhoses and local agricultural organs have become resigned to this fact.

Despite the significant growth in gross grain yield, in recent years the zone's enterprises have been cultivating their own quality seed very little, thereby not developing the necessary seed fund.

Everyone understands the necessity of developing industrial seed farming. Kolkhozes and sovkhoses cannot weaken their attention to raising their own high-quality seed as long as specialized seed-farming enterprises do not create the necessary material-technical base and as long as drying-seed-cleaning complexes and plants for post-harvest processing of seed grain are not built. Unfortunately, there are frequent cases in which the grain that is harvested first is sold as commodity grain and the last grain that is harvested and that is of a poorer quality is left for the use of the enterprise. This practice is expensive for both the enterprise and the state as well.

This spring requires a special approach by the directors of enterprises and by agronomists. First it is necessary to reduce to a minimum all of the negative consequences of the poor sowing material and of the import of large quantities of seed of non-regionalized varieties. Already today we should determine the fields which will be sown in regionalized varieties, in order to allocate the best plots to them, even if their seed is of a poorer sowing quality. The seed should be sown during the optimal period in good-quality fields. Imported seed should be utilized primarily for feed crops--it develops the same vegetative mass as regionalized varieties. Grains must be sown with the mandatory application of granulated phosphorus-containing mineral fertilizers in the rows. Today this possibility exists in every kolkhoz and sovkhos in the zone. In other words, the agronomic service must have a specific work plan for each parcel of seed grain which considers germination energy, laboratory germinating capacity (and based on this, field germinating capacity), moisture content and infection of seed with diseases.

The productivity of grain crops depends greatly on the field germinating capacity of seeds and on the number of plants that have been preserved by harvest time. Because of the higher rate of trauma and of fungus infections this year seed material is in great need of warmth and preliminary treatment. Seed that has been moisture-conditioned should be treated with poisonous chemicals 1-1.5 months prior to sowing. The expenditure norm for the preparation can be decreased by 10-20 percent. High-moisture seed can be treated with fungicides as well, but not too long before sowing. Warm and treated seed has a higher field germinating capacity and the plants are preserved better for harvesting.

Today many seed parcels have a low germinating and growth energy. If they are sown deeply they will yield sparse and weak shoots. For this reason sowing units must be

carefully regulated in order to sow the seed at a lesser depth. Of course the special features of the spring, the existing meteorological factors and other factors must be taken into account. This refers to the rate of sowing seed as well.

After considering the quality of the seed for spring crops it would perhaps be worthwhile to make certain corrections in the structure of the grain field. In particular, we should maximally utilize the best seed of regionalized varieties existing within the enterprise. Modern varieties of barley, oats and spring wheat are relatively close to each other in potential productivity. For this reason, temporarily it is possible to substitute oats or spring wheat for barley and vice versa. This is better than maintaining crop structure at all cost by cultivating low-productivity imported varieties. The most important thing is to produce the largest harvest and to create a firm foundation for future growth.

The circumstances that have developed in the Nonchernozem require us to strengthen the work of scientific institutions and seed-farming enterprises to increase seed production. Within 1-2 years we must reinstate the best regionalized varieties of large reproductions. The RSFSR Ministry of Agriculture and the All-Russian Division of VASKhNIL have assigned scientific institutions the task of producing first-reproduction and elite seed.

We must also mention another important reserve for increasing productivity and the gross grain yield in the Nonchernozem--the accelerated multiplication and introduction into production of new highly productive varieties. In recent years many varieties that are highly productive and resistant to diseases and lodging, with good quality seed, have been regionalized. In the zone the following have received wide recognition: Zarya, Akhtyrchanka winter wheat; Voskhod-1, Chulpan and Start winter rye; Moskovskaya-35, Belorusskaya-12 and Ruso spring wheat; Vinnitskiy-7, Dvoran, Trumpf, Nadya, Luch and Nosovskiyy-9 spring barley; Gorizont, Mirnyy, Sel'ma and Kirovskiy oats; Mironovskoye-94, Kamskoye millet; Kalininskaya-7, Viktoriya buckwheat; and Neozypayushchiysya-1 and Uladovskiy-10 peas.

Whereas previously the increase in the new variety comprised 2-3 quintals of grain per hectare, today the intensive varieties secure the growth of productivity on the order of 5-8 and more quintals when optimal agrotechnology is applied.

Recently measures have been taken to more rapidly reproduce new varieties. They are introduced 2-3 years after regionalization instead of 5-7 years later, as was the case previously. Thus, in Gor'kovskaya Oblast Luch spring barley, which was regionalized in 1976, was sown on 172,000 hectares 2 years ago.

At the same time, in the Nonchernozem Zone new varieties are poorly reproduced. Last year they were sown on no more than 6 million hectares, or 36 percent of the total area of quality crops. In oblasts such as Novgorodskaya their proportion was only 14 percent; Kalininskaya-15; Ryazanskaya-16; and Kostromskaya--26 percent.

We must say directly that in the Nonchernozem Zone scientific institutions are laying the foundation for primary seed-farming links in an untimely manner and experimental-production enterprises are reproducing varieties slowly. And instead of selling kolkhozes and sovkhozes the elite seed of new varieties in the year that they are

regionalized, it is sold 2 or 3 years later. Thus, in Novgorodskaya and Pskovskaya Oblasts Kirovskiy oats were regionalized 2 years ago, but the scientific institutions are not rushing to produce this seed. In Pskovskaya Oblast the reproduction of this variety has been stopped altogether. For this same reason in Kalininskaya Oblast the Voskhod-1 winter rye variety, regionalized here about 3 years ago, occupies very small areas.

The path of new varieties from the plot of land to the field is a long one. Unfortunately, experimental-production enterprises of scientific institutions and teaching-experimental enterprises of higher educational institutions and technical institutes are not very interested in fulfilling plans to produce seed of higher reproductions. It turns out that the indicator of reproducing new varieties is not considered when evaluating the activities of these enterprises. Meanwhile, this indicator should be one of the most important.

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TILLING AND CROPPING TECHNOLOGY

EFFECTIVENESS OF USSR IRRIGATION SYSTEMS REVIEWED

Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 81 p 1

[Article prepared by the Main Administration of Irrigated Farming and Reclamation of the USSR Ministry of Agriculture and the editors of SEL'SKAYA ZHIZN': "Intensive Operations for the Irrigated Hectare!"]

[Text] Today the irrigated lands in our country exceed 17.3 million hectares. Grains, industrial crops, vegetables and feed crops on irrigated land will occupy over 14 million hectares. The area in corn for grain, rice, soybeans, vegetables and perennial grasses is being expanded.

The main goal was clearly defined at the 26th CPSU Congress--to decisively increase the effectiveness of land use, especially of reclaimed lands. Today we must be ready to answer the decisions of the party congress in deeds. Are sprinklers, pumping equipment, irrigational and collection-drainage networks in full working order? After all, the irrigation systems of kolkhozes and sovkhozes are large and complex, costing over 8 billion rubles. The final results--productivity-- depend greatly on their skilful operation and timely repair and preventive servicing.

It is satisfying to note that today the pace of cleaning intra-enterprise irrigation and collector-drainage networks is faster than last year's; in kolkhozes and sovkhozes alone reclamation workers flushed over 25 million cubic meters from canals. Over 100,000 hydrotechnical structures have been repaired. This work was completed successfully in most enterprises of the RSFSR, Uzbekistan, Kazakhstan, Tajikistan and Turkmeniya. But why are some kolkhozes and sovkhozes of the Kirghiz, Georgia and Moldavia lagging behind in the cleaning of the reclamation network? There are no objective reasons for this, and we must remember a well-known fact--lags in preparations can result in a disruption of work schedules, and if the first delivery of water to the fields is even 5-7 days late later irrigations will not be able to make this up, nor will fertilizers or other agrotechnical methods.

If fields are not leached in the republics of Central Asia, Kazakhstan and Azerbaijan, many of the irrigated plots will decrease sharply in productivity. This important agromeliorative device--leaching--has been completed on 1,060,000 hectares in the country. The kolkhozes and sovkhozes of the Turkmen SSR are leaching their lands ahead of schedule. But in some enterprises of Uzbekistan and Azerbaijan there have been unjustified lags in this urgent work as well as in moisture retention operations. Time is hurrying us along, spring will not wait!

In the country in general irrigation, which guarantees even shoots, has been completed on 3,375,000 hectares. This work is being done well in many oblasts of the RSFSR, Tajikistan and Turkmeniya.

According to the data of the USSR Hydrometeorological Center, droughts are expected in some areas of irrigated farming. Work has already begun here to accelerate the building of structures related to increasing water supplies to land and to irrigation systems. At the same time it is essential to organize things so that each enterprise and brigade will develop and realize specific measures to use irrigation moisture more economically and sparingly. Here we can learn from the leading enterprises of Uzbekistan, where from year to year the plans for water consumption are observed correctly.

The fleet of sprinkler irrigation machines in kolkhozes and sovkhoses has grown to 130,000; of pumping units--to 105,000. With the aid of sprinkler technology over one-third of irrigated lands will receive moisture. We are satisfied that in the enterprises of the RSFSR, Georgia and Moldavia this technology is being readied better this year than last. However, there are lags in the repair of sprinklers and pumping units in Kazakhstan and Kirghizia. This is cause for particular alarm, because last year during the most intensive irrigation period 1,520 sprinklers remained idle in the Kazakh SSR and 142 in the Kirghiz SSR. Will the same thing be repeated? This is a question not only for the directors of the lagging enterprises, but also for the State Committee of the Agricultural Equipment Association, which supplies spare parts for sprinklers unsatisfactorily. As before there is an acute shortage of Druzhba benzene motors, impellers and sprinkler apparatuses for the Volzhanka and deflector nozzles for the DDA-100MA.

In a number of enterprises the broad irrigation machinery has worn out after many years of use. For example, in Rostovskaya Oblast it is essential to replace 15 Fregats. The exchange fund is not large, and the ministry of the shipbuilding industry continues to deliver these riggings without a system of hydraulic protection, which excludes their operation on a 24-hour basis and which consequently decreases the load per machine.

Another urgent problem is that of providing sprinkler technology, especially Fregats and Volzhankas with sufficient cadres for two-shift operations. Clearly there is a shortage of machinists for sprinkler machines and pumping stations in a number of oblasts of the RSFSR and the Uzbek SSR. We must take all measures to fill the ranks of reclamation workers and machine operators in order not to repeat the situation of last year, when for two-shift work there was a shortage of 20,000 machinists for pumping stations and for sprinkler systems.

To learn to work more effectively and to manage more effectively--this requirement of the party congress presupposes the planned introduction of leading experiences. We know to measure up against, from whom to take the example! In a large number of kolkhozes and sovkhoses in the country masters of irrigated farming regularly produce 50-60 quintals of winter wheat, 100-120 quintals of corn for grain, 60-70 quintals of rice, 40-50 quintals of cotton raw materials, and 120-150 quintals of alfalfa hay per hectare on large areas of land. But alas, there are many examples of a different order.

Why is it that not all irrigated plots bring the necessary returns? Most frequently this is because the schedule and norms for irrigation are violated, little organic fertilizer is applied and mineral fertilizers are not always used on irrigated lands as they should be. Permanent brigades and links responsible for the entire complex of work and for the final results--the harvest--have not been created everywhere. The piecework-bonus system of wages with advances is being introduced slowly. We cannot consider it normal that a number of agricultural organs in some oblasts do not secure the priority allocation of chemicals for plant protection, feed-harvesting machinery, trucks and other equipment for irrigated lands.

We should also say that the important reserve of utilizing repeat, intermediate and joint crops is not being made use of adequately. The experience of many enterprises and the data of scientific-research institutions convincingly indicates that such an intensive use of the irrigated hectare yields an additional 200-300 quintals of green mass of corn and winter rape, 8-15 quintals of buckwheat and 15-25 quintals of millet per hectare.

Very little time remains until the beginning of vegetative irrigation in the southern region of the country. It is important that each kolkhoz and sovkhoz be ready completely for these days. A high level of agrotechnology and an effective structure of sowing fields will ensure that each hectare brings the maximum returns during the first year of the five-year plan.

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